

The paragraph in the Abstract is replaced with the following replacement paragraph:

An electron beam physical vapor deposition (EBPVD) apparatus ~~and a method for producing using the apparatus to produce~~ a coating material (e.g., a ceramic thermal barrier coating) on an article. The EBPVD apparatus generally includes a coating chamber that is operable at elevated temperatures and subatmospheric pressures. An electron beam gun projects an electron beam into the coating chamber through an aperture in a wall of the chamber and onto a coating material within a coating region defined within the chamber, causing the coating material to melt and evaporate. An article is supported within the coating chamber so that vapors of the coating material deposit on the article. The operation of the EBPVD apparatus is enhanced by the inclusion within the coating chamber of a second chamber that encloses the aperture so as to separate the aperture from the coating region. The second chamber is maintained at a pressure lower than the coating region ~~or adaptation of one or more mechanical and/or process modifications, including those necessary or beneficial when operating the apparatus at coating pressures above 0.010 mbar.~~